AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

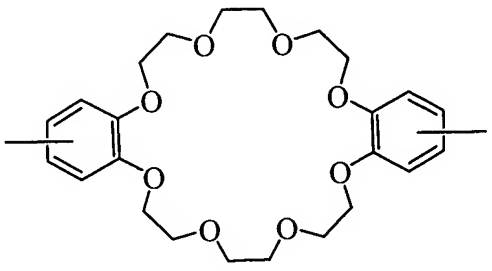
LISTING OF CLAIMS:

1-12. (canceled).

13. (original): A method of producing a crosslinked body, which comprises crosslinking a polymer having a plurality of large cyclic structures and a bifunctional ammonium salt having a disulfide bond in the presence of thiols through mechanical bonding with a rotaxane structure.

14. (previously presented): The method according to claim 13, wherein the polymer having a plurality of large cyclic structures is a polycrown ether.

15. (previously presented): The method according to claim 14, wherein the polycrown ether has a crown ether unit represented by the following formula (I):



..... (I)

16. (previously presented): The method according to claim 15, wherein the polycrown ether has the crown ether unit of the formula (I) and a urethane bond.

17. (previously presented): The method according to claim 13, wherein the bifunctional ammonium salt having the disulfide bond is represented by the following formula (II):

$$(R^1\text{-}N^+H_2\text{-}R^2\text{-}S\text{-}S\text{-}R^2\text{-}N^+H_2\text{-}R^1)\cdot 2X^- \quad \cdots\cdots (II)$$

(wherein R^1 is a bulky group larger than a hole size of the crown ether unit in the polycrown ether, R^2 is a bivalent hydrocarbon residue, which may include a hetero atom, and X^- is a monovalent anion).

18. (original): A method of producing a crosslinked body, which comprises polymerizing [3]rotaxane consisting of one shaft and two polymerizable rings at portions of the rings.

19. (previously presented): The method according to claim 18, wherein a molecule constituting the polymerizable ring is a crown ether.

20. (previously presented): The method according to claim 18, wherein a molecule constituting the shaft is a bifunctional ammonium salt having two urethane bonds.

21. (previously presented): The method according to claim 20, wherein the bifunctional ammonium salt having the two urethane bonds is represented by the following formula (III):

$$(R^1\text{-}N^+H_2\text{-}R^3\text{-}OCONH\text{-}R^4\text{-}NHCOO\text{-}R^3\text{-}N^+H_2\text{-}R^1)\cdot 2X^- \quad \cdots\cdots (III)$$

(wherein R^1 is a bulky group larger than a hole size of the crown ether unit in the polycrown ether, R^3 and R^4 are independently a bivalent hydrocarbon residue, which may include a hetero atom, and X^- is a monovalent anion).

22. (original): A method of producing a crosslinked body, which comprises polymerizing a pseudorotaxane formed by inserting a polymerizable chain molecule into each ring of a compound having two large cyclic structures at a portion of the chain molecule.

23. (previously presented): The method according to claim 22, wherein the compound having two large cyclic structures is a biscrown ether.

24-27. (canceled).